Creationism versus Darwinism: A Third Alternative

Brig Klyce and Chandra Wickramasinghe

In the highly polarized dispute between Darwinism and creationism, our position is unique. Although we do not align ourselves with either side, both sides treat us as opponents. Thus, we are outsiders with an unusual perspective—and our suggestion for a way out of the crisis has not yet been considered.

It must be unusual for the scientific community to be so strongly at odds with the general public on matters relating to evolution and the origin of life. Recent polls show that a clear majority of American adults do not accept the standard Darwinian account of evolution. A number of state legislatures and boards of education in the United States are now rewriting the rules in order at least to prevent Darwinism from being the only theory taught to pupils in their schools. In response, mainstream science sees no alternative but to mount a propaganda campaign advocating the standard Darwinian story in its narrowest and most restricted context.

The crisis is grave enough to precipitate a Kuhnian paradigm shift. The new paradigm we advocate would actually give some satisfaction to both sides, because, like John Lyne's students, we think that both sides have

something worthwhile to say. But the relevant facts need to be distilled from the dogma.[1]

Creationists Are Right to Question Darwinism

The existing Darwinian account of evolution does not adequately explain sustained macroevolutionary progress, let alone the origin of life in the first place. That inadequacy must continue to be actively discussed and researched until a more satisfactory relationship between evidence and theory is established.

Probability arguments have been used for many years to demonstrate that the first origin of life from nonlife is an exceedingly improbable affair. The odds against such an origin can be measured in terms of numbers like $10^{40,000}$ to 1, truly superastronomical numbers. Darwinists scoff at these numbers and seldom consider them. Even so, the standard textbook story of a primordial soup on a primitive Earth leading to the emergence of life from nonliving matter is beginning to look more unlikely than ever. Consequently, new theories are continually being proposed. Among mainstream Darwinists today, there are half a dozen theories of the origin of life, including nucleotides first, proteins first, nucleotides and proteins simultaneously, containers first, and mineral scaffolds first. The proposed environments in which this origin is considered most likely to have taken place also range widely: near hot, undersea vents; in a cold, ice-covered sea; in tidal pools; deep underground; and in space. We welcome the growing acceptance that this last environment, space, could even harbor life and deliver it to Earth.

Besides the origin of life, there is equal trouble for Darwinian ideas of evolution, where the doubts are even older. Although sustained macroevolutionary progress, as evidenced in the geological record, must be accepted as an irrefutable fact, major questions remain in regard to the precise mechanisms by which evolutionary changes are wrought. Certainly, Mendelian genetics and modern gene-sequencing have offered much deeper insights into the mechanics of evolutionary change than Darwin and Wallace could have known about in the late nineteenth century. But a mechanism leading to truly innovative changes still continues to elude us. As Ernst Mayr wrote in 1988, "Unfortunately, the genetics of microevolutionary processes has been unable to provide a full explanation of macroevolution."[2] Whereas adaptation produced by small mutations is not in dispute, truly innovative change requires genes that do not appear to

have been derived from prior genes by small mutations. As W. Ford Doolittle observes, "Many eukaryotic genes . . . seem to come from nowhere."[3]

Darwinists try to dismiss such observations with hand waving. But the ability of Darwinian evolution to produce sustained macroevolutionary progress cannot be firmly established without closed-system experiments. The ones that have been conducted so far do not sustain the theory. In a series of experiments with E. coli bacteria, no truly innovative changes were achieved even after 25,000 generations.[4] The fossil record, however, was generated in an open system, the biosphere. Here, just as cells from elsewhere may have seeded life on Earth originally, the genes that bring about the sustained macroevolutionary progress we observe may also come from elsewhere.

Until the origin of life and sustained macroevolutionary progress are demonstrated in closed-system experiments, the Darwinian account of them is on the same footing as Aristotle's theory of spontaneous generation before Pasteur. Darwinism should continue to be challenged to produce such evidence.

Darwinists Are Right to Defend Science

Science and religion are two great manifestations of the human spirit. Religious belief is essentially of a revelatory character, while scientific facts are the result of rigorous experiment and intellectual discipline. Scientific procedures are based on the assumption that no violations of physical law occur. When violations seem to occur, scientists may decide that the evidence was anomalous. Or perhaps the laws were not correctly understood and need to be amended. Of course, this process of amendment and reappraisal has not been completed.

Today, Darwinian theory extends well beyond the evidence, as creationists rightly notice. In this case, the details of the theory, not the underlying principles of science, should be challenged. But Phillip Johnson's attempt to overthrow "naturalism" does attack these very principles. As William Dembski complains, "For the sake of inquiry we are required to pretend that God does not exist."[5] Yes, that's how science is done. One may object to this principle, but it is the essence of science. Even if it were true that God, by a miracle, created life out of ordinary matter, it could not be established scientifically. Miracles are simply not amenable to scientific investigation, and scientists are right to dismiss them as unscientific.

How Can the Crisis Be Resolved?

A scientific solution is possible if Earth's biosphere is open to biological input from elsewhere. Within the last decade, mainstream science has admitted the possibility that life on Earth may have been seeded by germs from space—the basic panspermia theory. The first evidence of terrestrial life appears at about four billion years before the present, when the earth was being severely bombarded by comets and asteroids. This early start of life is well explained if life in the form of microorganisms was brought here along with the colliding comets.

If comets seeded Earth with microbial life some four billion years ago, that process must necessarily have continued to the present day. With cosmic microbes supplying a continual replenishment of genes, it would seem inevitable that Darwinian evolution, including the process of natural selection, must proceed in response to the arrival of new genes that serve as uncorrupted evolutionary potential. The details of the processes leading up to the accommodation of cometary genes within the genomes of evolving terrestrial life-forms is outside the scope of the present essay.

We note here, however, that several aspects of this general picture are in accord with recent data from molecular biology. First, horizontal gene transfer has recently been shown to play a major role in macroevolutionary progress.[6] Second, many genes appear to be older, when judged through sequence analysis and mutation rates, than they should be according to their position within geological strata in the fossil record.[7] Thus, the base of the microbial tree of life is looking more elusive that ever before, and the roots of the tree may well turn out to be firmly anchored, not on Earth but in the deep cosmos.

This expanded version of panspermia ("strong panspermia") is altogether different from the established Darwinian paradigm. It holds that, instead of sustained macroevolutionary progress, the history of life on Earth could actually be the development and sorting out, over many generations, of preexisting highly evolved cosmic life.

Must the Big Bang Rule Biology?

At this point, in our experience, creationists and Darwinists become aligned. They both argue that life on Earth, highly evolved or not, cannot simply descend from prior life ad infinitum, because there was a big bang. By logic, if the universe is a closed system that began in a lifeless state a

finite time ago, then the origin of life and sustained macroevolutionary progress must have subsequently happened in it.

We are not surprised that creationists have adopted this account of creation. If the universe came from a big bang, preceded by nothing, it was in a sense a miracle. But we are puzzled that science, on debatable evidence and in violation of its own principles, seems to advocate a miracle. As John Maddox commented in 1998, "It is mystifying that a large part of the community of astronomers and astrophysicists around the world should regard the big bang as a good approximation of something called 'the truth' when they are aware of the empirical problems crying out for attention. Can we no longer live with the knowledge that we are ignorant of many things?"[8]

In our opinion, the standard big bang theory has enough problems of its own, and science should not ask it also to govern all of biology. In any case, if Darwinism can account for the origin of life and sustained macroevolutionary progress, it should be able to cite firmer and more immediate evidence than the big bang. Without the strict and narrow interpretation of the big bang, nothing says that life, even highly evolved life, could not come from the eternal past. That possibility allows for a fully scientific account of evolution and the origin of life on Earth—the strong version of panspermia. In this account, life descends only from prior life that was at least as highly evolved as its descendents.

What strong panspermia does not do is account for life "in the first place." Similarly, neither does the big bang, nor any theory, answer the question, "Why is there anything instead of nothing at all?" In our opinion, science has nothing to contribute on questions pertaining to the origin of physical reality or the origin of life. These matters are properly part of religion and not of science.

Meanwhile, What Should Be Taught in Our Schools?

We wish that science teachers would distinguish clearly between firmly established empirical facts concerning evolution and theories about mechanisms. They forget the fact that any theory of the world has at most a provisional, pro tem value. It is valid only until it is falsified or a better model is proposed. When the current favorite theory leaves as much unexplained as Darwinism does, students must learn that scientific alternatives exist. Failure to mention them is deceitful.

There are, of course, some problems in science for which a definite solution is possible, as, for instance, in the mathematics and the science of planetary motions. But the biggest problems about the ultimate origin of physical reality, or of life, clearly do not come under this heading. For them, science must remain silent.

Notes

1. John Lyne, "Intelligent Dasein," *Rhetoric and Public Affairs* 1, no. 4 (1999): 579–85.
2. Ernst Mayr, *Toward a New Philosophy of Biology* (Cambridge: Harvard University Press, 1988), 405.
3. W. Ford Doolittle, *Scientific American* 282, no. 2 (Feb. 2000): 90.
4. D. Papadopoulos et al., *Proceedings of the National Academy of Sciences USA* 96 (1999): 3807.
5. William A. Dembski, *Intelligent Design: The Bridge Between Science and Theology* (Downers Grove, Ill.: InterVarsity Press, 1999), 103.
6. Michael Syvanen and Clarence I. Kado, eds., *Horizontal Gene Transfer,* (Boston: Kluwer Academic Publishers, 1999).
7. Gregory A. Wray, Jeffrey S. Levinton, and Leo H. Shapiro, "Molecular Evidence for Deep Precambrian Divergences among Metazoan Phyla," *Science* 274 (25 Oct. 1996): 568–73.
8. John Maddox, *What Remains to Be Discovered* (New York: Free Press, 1998), 374–75.